CHAP. XXII.

PLATE XIV. ON BRIDGES OF IRON.

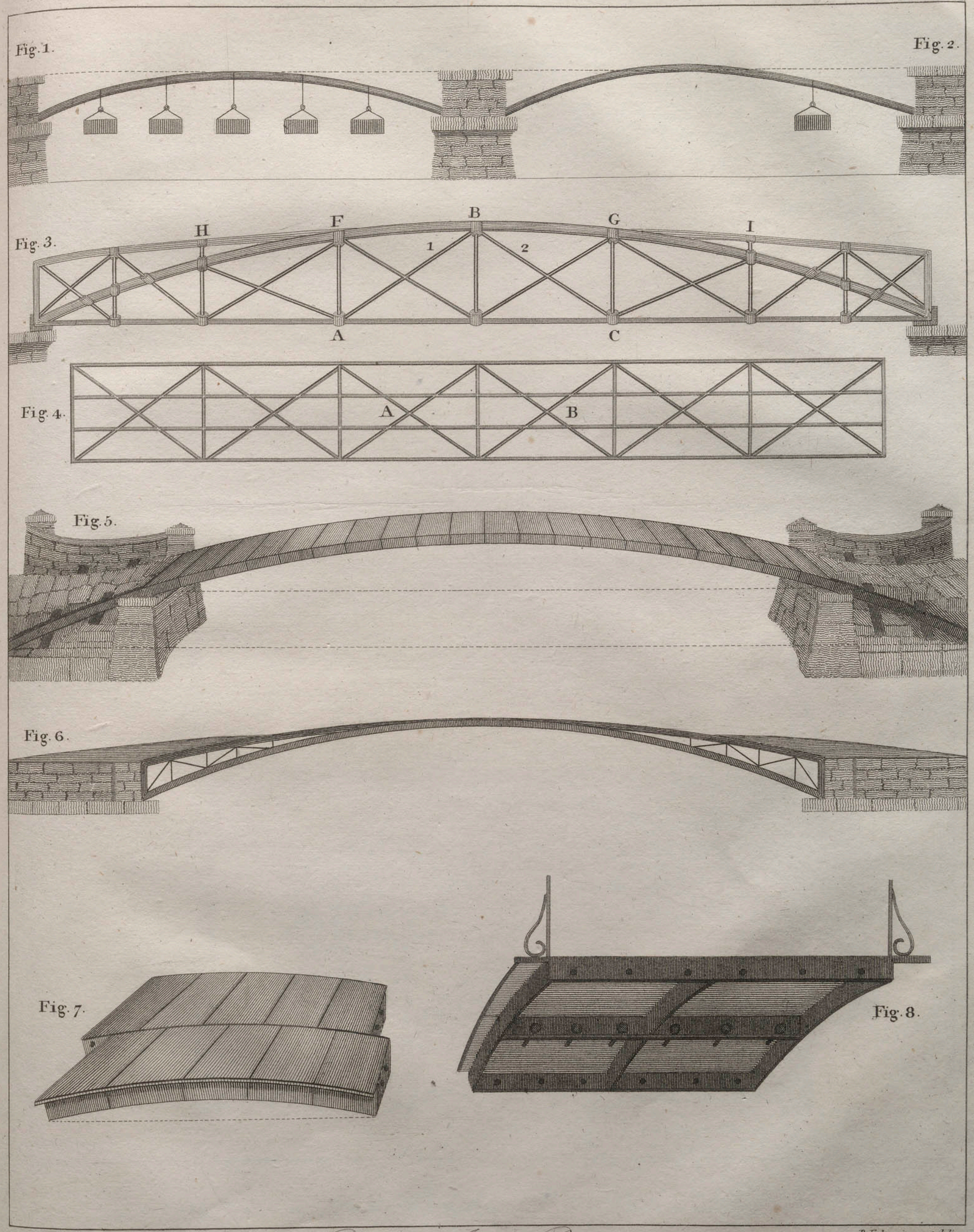
ALTHOUGH various have been, and are, the opinions relative to the conſtruction of bridges of iron and wood; each artiſt ſeems neceſſitated to reſort to ſomething like an arch, but differing in their mode of producing it: they frequently create labour and expence by erecting a complicated fabric.

But, on this head, I conceive the firſt care is to have ſufficient butments; after which, let each ſegment of a circle, compoſing a rib, be formed of ſingle pieces as long as can conveniently be caſt; and it is evident, a circle muſt be compreſſed into a ſtreight line, or the butments ſeparate before the bridge can come down.

It is therefore only neceſſary to form a ſegment, ſo that it may not change its poſition, by ſinking in one part and riſing in another, by the various weights which it may have to ſupport, alſo guard againſt yielding ſide-ways; for this purpoſe, the great quantity of iron or wood is not ſo material as a judicious arrangement of the parts.

In iron, or wood, the artiſt may be furniſhed with pieces of greater length than poſſibly can be obtained of ſtone; conſequently, there will not be ſuch numerous joinings; and thus the ſpan may be further extended: on which ſee Fig. I.

This



Parts of Iron Bridges.

R. Fulton inven. et delin.

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